

Appl. No. 09/731,264
Amdt. dated July 11, 2003
Preliminary Amendment

PATENT

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (Currently Twice Amended) A multistep method of polishing a semiconductor substrate with a polishing fluid to remove a selected amount of material from said substrate, said method comprising:

polishing said substrate with a cerium-based polishing fluid to remove a first portion of said selected amount of material by holding said substrate against a polishing pad with a polishing force while applying a polishing solution to said polishing pad;

rinsing said polishing pad with a rinsing fluid; and

polishing said substrate with the cerium-based polishing fluid to remove a second portion of said selected amount of material by holding said substrate against said polishing pad with a polishing force while applying said polishing fluid to said polishing pad, ~~wherein the polishing pad is not roughened by a pad conditioner between polishing the first and second portions of the material.~~

2. (Currently Amended) The method of claim 1 wherein said polishing fluid comprises cerium oxide and an additive is an unstable polishing fluid.

3. (Original) The method of claim 1 wherein said first portion and said second portion equal said selected amount.

4. (Original) The method of claim 2 wherein said unstable polishing fluid is mixed in a point of use mixing system prior to applying said polishing solution to said polishing pad.

5. (Original) The method of claim 1 wherein said rinsing fluid comprises deionized water.

6. (Original) The method of claim 1 wherein said rinsing is done while said substrate is held against said polishing pad with a 0 psi force.

Appl. No. 09/731,264
Amdt. dated July 11, 2003
Preliminary Amendment

PATENT

7. (Currently Twice Amended) A multistep method of polishing a semiconductor substrate in an inline polishing that includes at least first and second polishing stations, wherein said first polishing station includes a first polishing pad and said second polishing station includes a second polishing pad, said method comprising:
- transferring said substrate to said first polishing station;
 - polishing said substrate to remove a first portion of material by holding said substrate against said first polishing pad with a polishing force while applying a first cerium-based polishing solution to said first polishing pad;
 - rinsing said first polishing pad with a rinsing fluid;
 - polishing said substrate to remove a second portion of material by holding said substrate against said first polishing pad with a polishing force while applying said first cerium-based polishing fluid to said first polishing pad, wherein the polishing pad is not roughened by a pad conditioner between polishing the first and second portions of the material;
 - transferring said substrate to said second polishing station; and
 - polishing said substrate to remove a third portion of material by holding said substrate against said second polishing pad with a polishing force while applying a second polishing solution to said second polishing pad.
8. (Currently Amended) The method of claim 7 wherein said first polishing fluid comprises cerium oxide and an additive ~~is an unstable polishing fluid~~.
9. (Original) The method of claim 7 wherein said first portion and said second portion equal said selected amount.
10. (Original) The method of claim 8 wherein said unstable polishing fluid is mixed in a point of use mixing system prior to applying said polishing solution to said polishing pad.
11. (Original) The method of claim 7 wherein said rinsing fluid comprises deionized water.
12. (Original) The method of claim 7 wherein said rinsing is done while said substrate is held against said p lishing pad with a 0 psi force.

Appl. No. 09/731,264
Amdt. dated July 11, 2003
Preliminary Amendment

PATENT

13. (Original) The method of claim 7 wherein said substrate is transferred to and polished at said second polishing station before being transferred to and polished at said first polishing station.

14. (New) The method of claim 2 wherein said additive is a surfactant.

15. (New) The method of claim 8 wherein said additive is a surfactant.

16. (New) The method of claim 2 wherein said additive is a polycarboxylate.

17. (New) The method of claim 8 wherein said additive is a polycarboxylate.

18. (New) The method of claim 14 wherein said polishing fluid selectively removes oxide as compared to nitride.

19. (New) The method of claim 15 wherein said polishing fluid selectively removes oxide as compared to nitride.
